********** Welcome to STN International **********
=> file reg
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 0.21 0.21
=> s pi9
L1 5 PI9
=> s l1 not dna
6553501 DNA
L2 3 L1 NOT DNA
=> d 1-3

L2 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2003 ACS
RN 391966-08-8 REGISTRY
CN ***Serine proteinase inhibitor (human gene PI9) (9CI)*** (CA INDEX NAME)
OTHER NAMES:
CN GenBank U71364-derived protein GI 1613850
FS PROTEIN SEQUENCE
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

RELATED SEQUENCES AVAILABLE WITH SEQLINK

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
*** USE 'SQD' OR 'SQIDE' FORMATS TO DISPLAY SEQUENCE ***
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L2 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2003 ACS
RN 183869-07-0 REGISTRY
CN Proteinase inhibitor, PI-9 (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Cytoplasmic antiproteinase 3
CN Protease inhibitor 9
CN Proteinase inhibitor 9
CN Proteinase inhibitor CAP-3
CN ***Proteinase inhibitor PI9***
CN SerpinB9
MF Unspecified
CI MAN
SR CA
LC STN Files: BIOSIS, CA, CAPLUS, TOXCENTER

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
22 REFERENCES IN FILE CA (1962 TO DATE)
22 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L2 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2003 ACS
RN 172643-59-3 REGISTRY
CN Proteinase inhibitor, serpin, 9 (human placenta clone H2-2-11) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN PN: WO9957273 SEQID: 4 unclaimed protein
CN Protein CAP 3 (human placenta clone H2-2-11 cytoplasmic antiproteinase)
CN ***Proteinase inhibitor 9 (human gene PI9)***
CN ***Proteinase inhibitor, PI9 (human gene PI9)***
FS PROTEIN SEQUENCE
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

RELATED SEQUENCES AVAILABLE WITH SEQLINK

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
*** USE 'SQD' OR 'SQIDE' FORMATS TO DISPLAY SEQUENCE ***
4 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

=> file ca
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 16.36 16.57
FILE 'CA' ENTERED AT 13:24:44 ON 08 JAN 2003
=> s hiv and l1
44020 HIV
26 L1
L3 0 HIV AND L1
=> s l1
L4 26 L1
=> d py ti

L4 ANSWER 1 OF 26 CA COPYRIGHT 2003 ACS
PY 2001
TI Estrogen regulation of proteinase inhibitor 9 gene expression and interleukin-1.beta. production

=> d 2-26 py ti

L4 ANSWER 2 OF 26 CA COPYRIGHT 2003 ACS
PY 2002

TI Molecular characterization of breast cancer cell lines by expression profiling

L4 ANSWER 3 OF 26 CA COPYRIGHT 2003 ACS
PY 2002
TI Expression levels of apoptosis-related proteins predict clinical outcome in anaplastic large cell lymphoma

L4 ANSWER 4 OF 26 CA COPYRIGHT 2003 ACS
PY 2001
TI A unique downstream estrogen responsive unit mediates estrogen induction of proteinase inhibitor-9, a cellular inhibitor of IL-1.beta.-converting enzyme (caspase 1)

L4 ANSWER 5 OF 26 CA COPYRIGHT 2003 ACS
PY 2002
TI Expression of the granzyme B inhibitor, protease inhibitor 9, by tumor cells in patients with non-Hodgkin and Hodgkin lymphoma: a novel protective mechanism for tumor cells to circumvent the immune system?

L4 ANSWER 6 OF 26 CA COPYRIGHT 2003 ACS
PY 2001
TI Perforin-independent expression of granzyme B and proteinase inhibitor 9 in human testis and placenta suggests a role for granzyme B-mediated proteolysis in reproduction

L4 ANSWER 7 OF 26 CA COPYRIGHT 2003 ACS
PY 2002
TI Human stress genes identified using DNA microarrays

L4 ANSWER 8 OF 26 CA COPYRIGHT 2003 ACS
PY 2000
TI The role of granzymes and serpins in regulating cell growth and death

L4 ANSWER 9 OF 26 CA COPYRIGHT 2003 ACS
PY 2001
TI Blockade of the granzyme B/perforin pathway through overexpression of the serine protease inhibitor PI-9/SPI-6 constitutes a mechanism for immune escape by tumors

L4 ANSWER 10 OF 26 CA COPYRIGHT 2003 ACS
PY 2001
TI The serpin proteinase inhibitor 9 (PI-9)

L4 ANSWER 11 OF 26 CA COPYRIGHT 2003 ACS
PY 2001
TI The Granzyme B Inhibitor, PI-9, Is Present in Endothelial and Mesothelial Cells, Suggesting That It Protects Bystander Cells during Immune Responses

L4 ANSWER 12 OF 26 CA COPYRIGHT 2003 ACS
PY 2001
TI Nucleocytoplasmic distribution of the ovalbumin serpin PI-9 requires a nonconventional nuclear import pathway and the export factor Crm1

L4 ANSWER 13 OF 26 CA COPYRIGHT 2003 ACS
PY 2001
TI Importance of the P4' residue in human granzyme B inhibitors and substrates revealed by scanning mutagenesis of the proteinase inhibitor 9 reactive center loop

L4 ANSWER 14 OF 26 CA COPYRIGHT 2003 ACS
PY 2001
TI The granzyme B inhibitor, protease inhibitor 9, is mainly expressed by dendritic cells and at immune-privileged sites

L4 ANSWER 15 OF 26 CA COPYRIGHT 2003 ACS
PY 2000
2001
2002
2002
TI Adenoviral vectors having nucleic acids encoding immunomodulatory molecules

L4 ANSWER 16 OF 26 CA COPYRIGHT 2003 ACS
PY 2000
TI The serpin proteinase inhibitor 9 is an endogenous inhibitor of interleukin 1.beta.-converting enzyme (caspase-1) activity in human vascular smooth muscle cells

L4 ANSWER 17 OF 26 CA COPYRIGHT 2003 ACS
PY 2000
TI Proteinase inhibitor 9, an inhibitor of granzyme B-mediated apoptosis, is a primary estrogen-inducible gene in human liver cells

L4 ANSWER 18 OF 26 CA COPYRIGHT 2003 ACS
PY 1999
2000
2002
1999
2002
1999
TI human cytoplasmic antiproteinase-3 coding sequence and applications for gene therapy

L4 ANSWER 19 OF 26 CA COPYRIGHT 2003 ACS
PY 1999
TI Inhibition of neutrophil elastase by recombinant human proteinase inhibitor 9

L4 ANSWER 20 OF 26 CA COPYRIGHT 2003 ACS
PY 1998
TI A serpin gene cluster on human chromosome 6p25 contains PI6, PI9 and ELANH2 which have a common structure almost identical to the 18q21 ovalbumin serpin genes

L4 ANSWER 21 OF 26 CA COPYRIGHT 2003 ACS
PY 1998
TI Selective regulation of apoptosis: the cytotoxic lymphocyte serpin proteinase inhibitor 9 protects against granzyme B-mediated apoptosis without perturbing the Fas cell death pathway

L4 ANSWER 22 OF 26 CA COPYRIGHT 2003 ACS
PY 1997
TI Human proteinase inhibitor 9 (PI9) is a potent inhibitor of subtilisin A

L4 ANSWER 23 OF 26 CA COPYRIGHT 2003 ACS
PY 1997
TI A new family of 10 murine ovalbumin serpins includes two homologs of proteinase inhibitor 8 and two homologs of the granzyme B inhibitor (proteinase inhibitor 9)

L4 ANSWER 24 OF 26 CA COPYRIGHT 2003 ACS
PY 1996
TI A cytosolic Granzyme B inhibitor related to the viral apoptotic regulator cytokine response modifier A is present in cytotoxic lymphocytes

L4 ANSWER 25 OF 26 CA COPYRIGHT 2003 ACS
PY 1996
1997
1998
1996
1998
1996
1996
1997
1998
1998
TI Cloning and expression of mammalian cDNA for cytoplasmic antiproteinase-2 (CAP-2)and CAP-3

L4 ANSWER 26 OF 26 CA COPYRIGHT 2003 ACS
PY 1995
TI Molecular cloning, expression, and partial characterization of two novel members of the ovalbumin family of serine proteinase inhibitors

=> log hold
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 27.40 43.97
SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 13:25:49 ON 08 JAN 2003
Welcome to DIALOG

Dialog level 02.12.20D
? b 155
08jan03 13:28:59 User208669 Session D2189.1
$0.28 0.079 DialUnits File1
$0.28 Estimated cost File1
$0.01 TELNET
$0.29 Estimated cost this search
$0.29 Estimated total session cost 0.079 DialUnits

File 155:MEDLINE(R) 1966-2002/Dec W5
*File 155: Updating of completed records has resumed.See Help News155.
Alert feature enhanced with customized scheduling. See HELP ALERT.

Set Items Description
--- ----- -----------
? s pi9 or inhibitor(w)9 or cap3 or cap(w)3 or cytoplasmic (2w)3 or serpinb9 or serpin(w)b9 or serpin(w)9
28 PI9
205204 INHIBITOR
691323 9
95 INHIBITOR(W)9
15 CAP3
13044 CAP
2351653 3
22 CAP(W)3
99797 CYTOPLASMIC
2351653 3
282 CYTOPLASMIC(2W)3
0 SERPINB9
1127 SERPIN
613 B9
0 SERPIN(W)B9
1127 SERPIN
691323 9
0 SERPIN(W)9

S1 433 PI9 OR INHIBITOR(W)9 OR CAP3 OR CAP(W)3 OR CYTOPLASMIC (2W)3 OR SERPINB9 OR SERPIN(W)B9 OR SERPIN(W)9
?
? s hiv
S2 118863 HIV
? s s1 and s2
433 S1
118863 S2
S3 8 S1 AND S2
? t s3/7/8
3/7/8
DIALOG(R)File 155:MEDLINE(R)
07753047 93277316 PMID: 8503730
The lupus anticoagulant. High incidence of 'negative' mixing studies in a human immunodeficiency virus-positive population.
Clyne L P; Yen Y; Kriz N S; Breitenstein M G
Department of Clinical Laboratories, Yale-New Haven Hospital, CT.
Archives of pathology & laboratory medicine (UNITED STATES) Jun 1993, 117 (6) p595-601, ISSN 0003-9985 Journal Code: 7607091
Comment in Arch Pathol Lab Med. 1993 Jun;117(6) 589-90; Comment in PMID 8503727
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
We identified 100 patients (51 males and 49 females) as having the lupus anticoagulant. The following diagnoses were found in the patient population: human immunodeficiency virus positivity, 20%; systemic lupus erythematosus, 10%; prolonged preoperative activated partial thromboplastin time (APTT), 10%; procainamide hydrochloride-induced inhibitor, 9%; deep vein thrombosis, 6%; seizure disorders/epilepsy, 5%; and miscellaneous conditions, 40%. Identification was based on a prolonged APTT (> 40 seconds) that normalized with increased phospholipid concentrations and/or a prolonged Russell viper venom clotting time patient-control ratio of 1.20 or greater. In 68 cases (group 1), patient plasma prolonged the APTT of normal plasma in a 1:1 mixing study. However, in 32 cases (group 2), no such prolongation was observed. There was a significant difference between presenting APTTs in patients from group 1 (mean +/- SD, 58.29 +/- 13.30 seconds) compared with that in group 2 (mean +/- SD, 47.93 +/- 5.09 seconds). Furthermore, 66% of group 1 patients had elevated anticardiolipin antibody titers compared with only 41% in group 2. Of the 32 patients in group 2, 16 (50%) were positive for human immunodeficiency virus. We concluded that the investigation of a lupus anticoagulant should not be abandoned because patient plasma does not prolong the APTT of normal plasma in a mixing study, especially in a human immunodeficiency virus-positive population.
Record Date Created: 19930701

? t s3/7/1-7
3/7/1
DIALOG(R)File 155:MEDLINE(R)
11317717 21363678 PMID: 11471100
Two low doses of tenofovir protect newborn macaques against oral simian immunodeficiency virus infection.
Van Rompay K K; McChesney M B; Aguirre N L; Schmidt K A; Bischofberger N; Marthas M L
California Regional Primate Research Center, University of California, Davis, CA 95616-8542, USA. kkvanrompay@ucdavis.edu
Journal of infectious diseases (United States) Aug 15 2001, 184 (4) p429-38, ISSN 0022-1899 Journal Code: 0413675
Contract/Grant No.: RR-00169; RR; NCRR
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Simple affordable interventions are needed to reduce vertical human immunodeficiency virus (HIV) transmission in developing countries. The efficacy of 2 low doses (4 mg/kg, subcutaneously) or 1 high dose (30 mg/kg, subcutaneously) of the reverse-transcriptase inhibitor 9-[2-(phosphonometho xy)propyl]adenine (PMPA; tenofovir) to protect newborn macaques against simian immunodeficiency virus (SIV) infection was investigated. Thirteen newborn macaques were inoculated orally with virulent SIVmac251. The 4 placebo-treated animals (group A) became persistently infected. Groups B and C (n=4 in each group) received 2 4-mg/kg doses of PMPA, either 4 h before and 20 h after (group B) or 1 and 25 h after SIV inoculation (group C). One animal (group D) received a single 30-mg/kg dose of PMPA 1 h after SIV inoculation. Despite evidence of an initial transient infection, 3 group B animals, 2 group C animals, and the group D animal were SIV negative and seronegative at ages 19-23 months. Immune activation with recall antigens or pharmacologic immunosuppression with corticosteroids failed to reactivate viral replication. These data suggest that 1 or 2 doses of PMPA may protect human newborns against intrapartum HIV infection.
Record Date Created: 20010725

3/7/2
DIALOG(R)File 155:MEDLINE(R)
10749802 20283606 PMID: 10747937
Multimerization potential of the cytoplasmic domain of the human immunodeficiency virus type 1 transmembrane glycoprotein gp41.
Lee S F; Wang C T; Liang J Y; Hong S L; Huang C C; Chen S S
Division of Infectious Diseases, Institute of Biomedical Sciences, Academia Sinica, Taipei 11529, Taiwan, Republic of China.
Journal of biological chemistry (UNITED STATES) May 26 2000, 275 (21) p15809-19, ISSN 0021-9258 Journal Code: 2985121R
Document type: Journal Article

Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
We previously demonstrated that an envelope mutant of human immunodeficiency virus type 1 lacking the entire cytoplasmic domain interferes in trans with the production of infectious virus by inclusion of the mutant envelope into the wild-type envelope complex. We also showed that the envelope incorporation into virions is not affected when the wild-type envelope is coexpressed with the mutant envelope. These results suggest that an oligomeric structure of the cytoplasmic domain is functionally required for viral infectivity. To understand whether the cytoplasmic domain of human immunodeficiency virus type 1 transmembrane protein gp41 has the potential to self-assemble as an oligomer, in the present study we fused the coding sequence of the entire cytoplasmic domain at 3' to the Escherichia coli malE gene, which encodes a monomeric maltose-binding protein. The expressed fusion protein was examined by chemical cross-linking, sucrose gradient centrifugation, and gel filtration. The results showed that the cytoplasmic domain of gp41 assembles into a high-ordered structural complex. The intersubunit interaction of the cytoplasmic domain was also confirmed by a mammalian two-hybrid system that detects protein-protein interactions in eucaryotic cells. A cytoplasmic domain fragment expressed in eucaryotic cells was pulled down by glutathione-Sepharose 4B beads via its association with another cytoplasmic domain fragment fused to the C terminus of the glutathione S-transferase moiety. We also found that sequences encompassing the lentiviral lytic peptide-1 and lentiviral lytic peptide-2, which are located within residues 828-856 and 770-795, respectively, play a critical role in cytoplasmic domain self-assembly. Taken together, the results from the present study indicate that the cytoplasmic domain of gp41 by itself is sufficient to assemble into a multimeric structure. This finding supports the hypothesis that a multimeric form of the gp41 cytoplasmic domain plays a crucial role in virus infectivity.
Record Date Created: 20000630

3/7/3
DIALOG(R)File 155:MEDLINE(R)
10509659 20032061 PMID: 10564527
Expression of caspase-3 in brains from paediatric patients with HIV-1 encephalitis.
James H J; Sharer L R; Zhang Q; Wang H G; Epstein L G; Reed J C; Gelbard H A
Department of Neurology (Child Neurology Division), The University of Rochester Medical Center, NY 14642, USA.
Neuropathology and applied neurobiology (ENGLAND) Oct 1999, 25 (5) p380-6, ISSN 0305-1846 Journal Code: 7609829
Contract/Grant No.: CA-60421; CA; NCI; PO1 MH57556-01; MH; NIMH; PO1 NS31492-06; NS; NINDS; +
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Apoptosis of neurones, macrophages, and microglia occurs in the brains of paediatric patients with human immunodeficiency virus (HIV) type 1 encephalitis, which is often associated with pre-mortem neurological disease (progressive encephalopathy). We have previously reported that TUNEL-positive neurones in brain tissue from paediatric patients with HIV type 1 encephalitis and progressive encephalopathy are strikingly devoid of the pro-apoptotic gene product Bax, in marked contrast to brain-resident macrophages and microglia. Using immunocytochemical methods, the present study demonstrate that neurones in patients with HIV type 1 encephalitis and progressive encephalopathy, as well as macrophages and microglia, but not astrocytes, overexpress caspase-3, a pro-apoptotic enzyme that is proteolytically activated downstream of Bax-Bcl-2 dysregulation. Co-localization of neuronal cytoplasmic caspase-3 and nuclear TUNEL staining, a marker for fragmented DNA, was also infrequently observed in brain tissue from patients with HIV type 1 encephalitis and progressive encephalopathy. These findings suggest that vulnerable neurones in brain tissue from patients with HIV virus type 1 encephalitis and progressive encephalopathy undergo apoptosis by a mechanism that involves upregulation of caspase-3 in a pathway that is independent of Bax-Bcl-2 dysregulation. Furthermore, caspase-3 upregulation in apoptotic neurones likely occurs prior to DNA fragmentation.
Record Date Created: 19991130

3/7/4
DIALOG(R)File 155:MEDLINE(R)
10440969 99428512 PMID: 10497202
CCR5 HIV-1 coreceptor activity. Role of cooperativity between residues in N-terminal extracellular and intracellular domains.
Wang Z; Lee B; Murray J L; Bonneau F; Sun Y; Schweickart V; Zhang T; Peiper S C
Henry Vogt Cancer Research Institute, University of Louisville, Louisville, Kentucky 40202, USA.
Journal of biological chemistry (UNITED STATES) Oct 1 1999, 274 (40) p28413-9, ISSN 0021-9258 Journal Code: 2985121R
Contract/Grant No.: AI 41346; AI; NIAID; KO8 HL03923; HL; NHLBI
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Human (H-) CCR5 is the primary coreceptor for ENV-mediated fusion by R5 strains of human immunodeficiency virus type 1, whereas mouse (M-) CCR5 lacks this function. An array of 23 H/M-CCR5 hybrids containing increasing amounts of H-CCR5 extending from the N terminus generated by random

chimeragenesis had a biphasic pattern of coreceptor activity with JRFL and 89.6, revealing active regions in the N-terminal extracellular domain (N-ED) and at the junction of cytoplasmic loop 3. The M-CCR5 mutant in which divergent residues were replaced with the corresponding H-CCR5 N-ED sequence (NyYTsE) gained coreceptor function in fusion but not infection experiments. A M-CCR5 double mutant with substitution of human sequences for divergent residues from the N-ED and cytoplasmic loop 3 had augmented coreceptor activity in fusion assays and gain of function in infection experiments. The SIV-251 ENV utilized H- and M-CCR5 and variants. Flow cytometric analysis of M-CCR5 mutants and bifunctional receptors composed of CD4 domains fused to M-CCR5 mutants excluded the possibility that differences in coreceptor activity resulted from variations in cell surface expression. These results demonstrate that the coreceptor activity of the H-CCR5 N-ED is modulated by intracellular residues, illustrating the complexity of CCR5 requirements for interaction with ENV.
Record Date Created: 19991102

3/7/5
DIALOG(R)File 155:MEDLINE(R)
10295833 99265149 PMID: 10332745
Liposome-mediated delivery of antiviral agents to human immunodeficiency virus-infected cells.
Duzgunes N; Pretzer E; Simoes S; Slepushkin V; Konopka K; Flasher D; de Lima M C
Department of Microbiology, School of Dentistry, University of the Pacific, San Francisco, CA 94115, USA. nduzgune@uop.edu
Molecular membrane biology (ENGLAND) Jan-Mar 1999, 16 (1) p111-8, ISSN 0968-7688 Journal Code: 9430797
Contract/Grant No.: AI32399; AI; NIAID; AI35231; AI; NIAID
Document type: Journal Article; Review; Review, Tutorial
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Intracellular delivery of novel macromolecular drugs against human immunodeficiency virus type-1 (HIV-1), including antisense oligodeoxynucleotides, ribozymes and therapeutic genes, may be achieved by encapsulation in or association with certain types of liposomes. Liposomes may also protect these drugs against nucleases. Low-molecular-weight, charged antiviral drugs may also be delivered more efficiently via liposomes. Liposomes were targeted to HIV-1-infected cells via covalently coupled soluble CD4. An HIV-1 protease inhibitor encapsulated in conventional negatively charged multilamellar liposomes was about 10-fold more effective and had a lower EC90 than the free drug in inhibiting HIV-1 production in human monocyte-derived macrophages. The drug encapsulated in sterically stabilized liposomes was as effective as the free drug. The EC50 of the reverse transcriptase inhibitor 9-(2-phosphonylmethoxyethyl)adenine (PMEA) was reduced by an order of magnitude when delivered to HIV-1-infected macrophages in pH-sensitive liposomes. A 15-mer antisense oligodeoxynucleotide against the Rev response element was ineffective in free form against HIV-1 replication in macrophages, while delivery of the oligonucleotide in pH-sensitive liposomes inhibited virus replication. The oligodeoxynucleotide encapsulated in sterically stabilized pH-sensitive liposomes with prolonged circulation in vivo, which were recently developed in the laboratories of the authors, was also highly effective. A ribozyme complementary to HIV-1 5'-LTR delivered in pH-sensitive liposomes inhibited virus production by 90%, while the free ribozyme caused only a slight inhibition. Cationic liposome-mediated co-transfection of the HIV-regulated diphtheria toxin A fragment gene and a proviral HIV clone into HeLa cells completely inhibited virus production, while the frame-shifted mutant gene was ineffective. Co-transfection of the proviral genome and a gene encoding a Rev-binding aptamer into HeLa cells via transferrin-associated cationic liposomes inhibited virus production. These studies indicate that liposomes can be used to facilitate the intracellular delivery of certain anti-HIV agents and to enhance their therapeutic effects. These properties may be particularly advantageous in the development of novel macromolecular drugs, which may be necessary because of the emergence of virus strains resistant to the currently available drugs. (72 Refs.)
Record Date Created: 19990805

3/7/6
DIALOG(R)File 155:MEDLINE(R)
08935890 96298062 PMID: 8709110
Bis tertiary amide inhibitors of the HIV-1 protease generated via protein structure-based iterative design.
Melnick M; Reich S H; Lewis K K; Mitchell L J; Nguyen D; Trippe A J; Dawson H; Davies J F; Appelt K; Wu B W; Musick L; Gehlhaar D K; Webber S; Shetty B; Kosa M; Kahil D; Andrada D
Agouron Pharmaceuticals Inc. San Diego, California 92121, USA.
Journal of medicinal chemistry (UNITED STATES) Jul 5 1996, 39 (14) p2795-811, ISSN 0022-2623 Journal Code: 9716531
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
A series of potent nonpeptide inhibitors of the HIV protease have been identified. Using the structure of compound 3 bound to the HIV protease, bis tertiary amide inhibitor 9 was designed and prepared. Compound 9 was found to be about 17 times more potent than 3, and the structure of the protein-ligand complex of 9 revealed the inhibitor binds in an inverted binding mode relative to 3. Examination of the protein-ligand complex of 9 suggested several modifications in the P1 and P1' pockets. Through these modifications it was possible to improve the activity of the inhibitors another 100-fold, highlighting the utility of crystallographic feedback in inhibitor design. These compounds were found to have good antiviral

activity in cell culture, were selective for the HIV protease, and were orally available in three animal models.
Record Date Created: 19960910

3/7/7
DIALOG(R)File 155:MEDLINE(R)
08469678 95221021 PMID: 7705926
The human immunodeficiency virus(HIV) inhibitor 9-(2-phosphonylmethoxyeth yl)adenine (PMEA) is a strong inducer of differentiation of several tumor cell lines.
Balzarini J; Verstuyf A; Hatse S; Goebels J; Sobis H; Vandeputte M; De Clercq E
Laboratory of Virology and Experimental Chemotherapy, Rega Institute for Medical Research, Catholic University, Louvain, Belgium.
International journal of cancer. Journal international du cancer (UNITED STATES) Mar 29 1995, 61 (1) p130-7, ISSN 0020-7136 Journal Code: 0042124
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
9-(2-phosphonylmethoxyethyl)adenine (PMEA) is the prototype compound of a series of acyclic nucleoside phosphonate derivatives endowed with potent and selective anti-retroviral activity in vitro and in vivo. We have now found that PMEA is also a potent inducer of differentiation of a number of tumor cells, including human erythroleukemia K562 cells, rat choriocarcinoma RCHO cells and human acute promyelocytic leukemic HL-60 cells. At 10 microM PMEA, rat RCHO cell cultures could be almost fully differentiated, and at 50 microM PMEA, approximately 50% of the K562 cells could be triggered to produce hemoglobin. The differentiating activity of butyric acid was at least partially additive to that of PMEA when both drugs were combined in K562 cell cultures. PMEA needs to be present for at least 2 or 3 days in the K562 cell cultures to achieve optimal differentiating activity. This suggests that either a PMEA metabolite and/or its anti-metabolic effects may be responsible for differentiation of the tumor cells.
Record Date Created: 19950509
? ds
Set Items Description
S1 433 PI9 OR INHIBITOR(W)9 OR CAP3 OR CAP(W)3 OR CYTOPLASMIC (2W-
)3 OR SERPINB9 OR SERPIN(W)B9 OR SERPIN(W)9
S2 118863 HIV
S3 8 S1 AND S2
? log hold
08jan03 13:35:01 User208669 Session D2189.2
$3.50 1.092 DialUnits File155
$0.00 8 Type(s) in Format 6
$1.68 8 Type(s) in Format 7
$1.68 16 Types
$5.18 Estimated cost File155
$1.51 TELNET
$6.69 Estimated cost this search
$6.98 Estimated total session cost 1.172 DialUnits
Logoff: level 02.12.20 D 13:35:01